

Amendments To the Claims

Claim 1 (Original): A method of detecting thiopurine methyltransferase (TPMT) comprising: obtaining a biological sample from an individual; and assaying for the level of a TPMT-catalyzed reaction product.

Claim 2 (Original): The method of claim 1 wherein the assaying includes the steps of: (a) contacting the biological sample with an antibody that binds to a methylated reaction product of TPMT to form a complex; and (b) detecting said complex.

Claim 3 (Original): The method of claim 2 wherein the antibody binds to 6-methylmercaptopurine (6-MMP).

Claim 4 (Original): The method of claim 3 wherein the 6-MMP is free or bound to a carrier molecule or solid support.

Claim 5 (Original): The method of claim 1 wherein the antibody is a polyclonal antibody.

Claim 6 (Original): The method of claim 1 wherein the antibody is a monoclonal antibody.

Claim 7 (Original): The method of claim 1 wherein the biological sample is selected from the group consisting of blood, serum, and saliva.

Claim 8 (Original): The method of claim 2 wherein the detecting step further includes the substep of linking or incorporating a label into the antibody.

Claim 9 (Original): The method of claim 2 wherein the detecting step uses ELISA-based immunoenzymatic detection.

Claim 10 (Original): The method of claim 9 wherein the ELISA-based immunoenzymatic detection comprises the steps of: a) covalently binding substrate 6-mercaptopurine (6-MP) to a carrier protein to form a conjugate; b) coating the wells of an ELISA plate with the conjugate; c) methylating the conjugate; and d) measuring the optical signal of the methylated conjugate.

Claim 11 (Original): The method of claim 10 wherein the optical signal is measured at about 450 nm.

Claims 12-25 (Withdrawn).

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